

Claims

1. A filter for an air bag gas generator comprises  
a first layer formed by helically winding a wire rod  
having a cross-sectional area of 0.03 to 0.8mm<sup>2</sup> in such a way  
that a pitch angle of wire rods vertically superposed in the  
radial direction is symmetrical, and  
a second layer existing on the outer side of the first  
layer in the radial direction and formed to have a finer  
filter particle size than the first layer.
2. The filter for an air bag gas generator according  
to claim 1, wherein the second layer is formed from a filter  
material having a filter particle size of 6 to 400μm.
3. The filter for an air bag gas generator according  
to claim 1 or 2, wherein the second layer is formed by using  
a wire rod having a smaller cross-sectional area than the  
wire rod that forms the first layer, and a third layer formed  
from a wire rod having a larger cross-sectional area than the  
wire rod of the second layer is further formed on the outer  
side thereof in the radial direction.
4. The filter for an air bag gas generator according  
to claim 3, wherein the third layer is formed by helically  
winding the wire rod in such a way that the pitch angle of  
wire rods vertically superposed in the radial direction is  
symmetrical.

5. The filter for an air bag gas generator according to claim 3 or 4, wherein at least one of the first layer and the third layer is formed by sintering.

6. The filter for an air bag gas generator according to any one of claims 1 to 5, wherein the intersecting angle of wire rods of the first layer vertically superposed in the radial direction is greater than  $0^\circ$  and not more than  $90^\circ$ .

7. The filter for an air bag gas generator according to any one of claims 1 to 6, wherein, in the wire rod forming the first layer and helically wound and vertically superposed in the radial direction, the section vertically superposed in the radial direction and that is formed flat.

8. The filter for an air bag gas generator according to any one of claims 1 to 7, wherein the second layer projects from an axial end surface of a filter formed in a cylindrical shape.

9. The filter for an air bag gas generator according to any one of claims 1 to 8, wherein the second layer is formed from a wire rod having a wire diameter of 0.02mm to 0.7mm.

10. The filter for an air bag gas generator according to any one of claims 1 to 9, wherein the filter for an air bag gas generator purifies the gas generated by the combustion of a solid gas generating agent having a combustion temperature of not more than 2000K.

11. A method for the manufacture of a cylindrical filter for an air bag gas generator, comprising the steps of: forming a first layer by helically winding a wire rod having a cross-sectional area of 0.03 to 0.8mm<sup>2</sup> in at least one reciprocating process in the axial direction of the filter to be manufactured; and forming a second layer having a finer filter particle size than the first layer on the outer side of the first layer in the radial direction.

12. The method for the manufacture of a filter for an air bag gas generator according to claim 11, wherein the second layer is formed from a filter material having a filter particle size 6 to 400μm, and a third layer is further formed on the outer side of the second layer in the radial direction by using a wire rod having a larger cross-sectional area than the wire rod of the second layer.

13. The method for the manufacture of a filter for an air bag gas generator according to claim 12, wherein at least one of the first layer and third layer is sintered to be integrated.

14. A gas generator for an air bag in which gas is generated for inflating an air bag to restrain a passenger upon collision of a vehicle, comprising:

an ignition device as an actuation initiation device of the gas generator;

a solid gas generating agent that is ignited and burned by the ignition device to generate a gas for inflating the air bag; and

a filter for cooling the gas,

wherein said filter is the filter for an air bag gas generator according to any one of claims 1 to 10.